JANUARY 1994

CONDITIONS FOR THE IMPORTATION OF SOUTH-AMERICAN CAMELIDS
INTO AUSTRALIA FROM THE USA

1. DOCUMENTATION

a. Permission to import must be obtained in writing from the Director of Animal and Plant Quarantine (Australia) (herein called the Directory) prior to export of the animals. Permit applications can be obtained from, and completed forms with the appropriate fee, are to be submitted to, the Chief Quarantine Officer (Animals) of the State to which the import will be made. All animals must be identified by ear tag and microchip implant. A full description of each animal including microchip type, number and location must be provided.

b. All camelids must be accompanied by a "Permit to Import" and the appropriate Zoo-Sanitary Certificates (Appendices 1 and 2) which must not be modified without the written permission of the Directory. These documents must accompany the animals in transit.

c. A permit to import Camelids must be sought and obtained from Australian Nature Conservation Agency.

2. ELIGIBILITY

a. Importation under this protocol is restricted to camelids which have been continuously resident in the USA and/or Canada for a minimum of 12 months prior to the commencement of on farm isolation, or since birth if under 12 months of age.

b. Camelids for export to Australia must not have been depastured on premises grazed by domestic or wild deer for at least two years prior to on farm isolation.

c. Animals should not be exported in the last two months of pregnancy unless approved in writing by the Director.

3. QUARANTINE

a. All camelids for export to Australia from the USA must undergo the following quarantine periods:

(i) on-farm isolation: minimum of 30 days
(ii) pre-export quarantine: minimum of 80 days
(iii) post-arrival quarantine and surveillance as follows:
- minimum of 30 days at an Australian Quarantine Station
- this will be followed by a further period of 11 months in quarantine at an approved private quarantine station or post entry quarantine surveillance as stipulated by the Director.

Each period of control involves a testing and treatment program as set out in this document.

b. During the pre-export on-farm isolation the animals for export must be isolated, in a premises approved by APHIS, from all farm animals not of tested equivalent health status and must be tested and treated in accordance with the requirements set out in the attached Appendix 1.V.2. In addition, they must be isolated from feral and wild deer.

c. During the pre-export on-farm isolation, and before the application of an external parasiticide, the camelids must be shorn.

d. The pre-export quarantine premises must be approved by the Animal and Plant Health Inspection Service (APHIS). During the pre-export quarantine period (which must be the 80 day period immediately prior to export to Australia), the animals for export must not come into contact with any animal not of tested equivalent health status and must be tested and treated in accordance with the requirements set out in the attached Appendix 1.V.4.(ii). No domestic or wild deer shall have had access to the quarantine premises for at least two years.

e. An approved pre-embarkation quarantine premises may only be located in one of the following States:

Connecticut
Illinois (north of Springfield)
Indiana (north of Indianapolis)
Iowa
Maine
Massachusetts
Michigan
Minnesota
New Hampshire
New York
North Dakota
Ohio(north of Dayton)
Pennsylvania
Rhode Island
Vermont
Wisconsin

f. During the quarantine period at the Australian Animal Quarantine Station each animal will be subjected to:

(i) injection with an antibiotic effective against leptospirosis as directed by the Director; the first course commencing within 48 hours of arrival, and the second course 10-14 days later,

(ii) testing, after 21 days, for:
brucellosis (*Br abortus*)
bluetongue
epizootic hemorrhagic disease (EHD) of deer

(iii) testing for tuberculosis;

NOTE: tuberculosis testing must be done at least 90 days after the previous test for tuberculosis

(iv) treatment for internal and external parasites and *Psoroptes* ear mites as prescribed in 5.b.;

(v) any other tests or treatments as prescribed by the Director of Quarantine [or Chief Quarantine Officer (Animals) in the state of residence];

(vi) blood collection for preservation in the National Serum Bank.

g. During the one year post-arrival quarantine control period

- the animals must be tested for brucellosis and tuberculosis at the end of one year after entry to Australia

- the animals must be tested and/or treated for *Psoroptes* sp. ear mites one year after entry to Australia as prescribed by the Director;

- the animals may only be released from quarantine if the results of all prescribed tests are negative.

h. Following the period stated in "g" above, the camelids may be released from quarantine, placed under post-entry quarantine surveillance or maintained in quarantine at the discretion of the Director.

i. The death of any animal, during the entire period from commencement of on-farm isolation in the United States, to the end of quarantine or post-entry quarantine surveillance in Australia, must be notified immediately to the nearest government approved veterinarian. (In the event of a government approved veterinarian not being immediately available, a qualified private veterinary practitioner must be notified, and he/she must be advised that the animal is under quarantine surveillance.) Post-mortem examinations must be undertaken by the above veterinarian on any dead animals. Laboratory examinations to establish the cause of death must be conducted by an approved government veterinary laboratory.

4. COST RECOVERY

All costs incurred in performance of quarantine on each consignment of camelids and the costs of the accompanying veterinarian must be met by the owner or importer.

All costs of maintenance of the animals at an Australian Quarantine Station must be met by the owner or importer. All above costs are payable prior to the release of the animals from the quarantine station.

All private veterinary expenses incurred whilst the animals are in an Australian Quarantine Station will be met through private commercial arrangements between the veterinary practitioner and the owner/importer.

All costs associated with autopsies performed and laboratory tests conducted during any period of quarantine restriction must be met by the owner/importer.

5. PRESCRIBED TESTS AND TREATMENTS

a. The prescribed tests for respective diseases are:

- brucellosis - the ELISA test using a Protein G conjugate.

- tuberculosis - the single intradermal test in the USA, and the comparative intradermal tuberculin test in Australia, as specified in the AQIS procedure for the testing of camelids. The tests must not be conducted less than 90 days following any previous tuberculin test. The site for the intradermal tests in camelids is the skin of the thorax. (Refer to Appendix 3). For the single intradermal tests, a negative result is defined as no visible, palpable or measurable swelling over the site of injection. The tuberculin used must be of a potency not less than that recommended by OIE.

- *Psoroptes* mites - microscopic examination of saline flushings of both ear canals. Tests

for *Psoroptes* should be conducted in winter months whenever possible. See Appendix 4 for a proven and recommended method.

- *Parelaphostrongylus tenuis* - the modified Baermann test, each fecal sample must be 20 gms, each sample must remain in the test funnel for 24 hours at 18 °-20°C.

- Johne's disease - the absorbed ELISA test using anti-llama conjugate, or the AGID.

- vesicular stomatitis - the serum neutralization tests for Indiana and New Jersey serotypes.

- bluetongue and EHD of deer - the AGID tests and in the event of equivocal results, the serum neutralization test.

- *Trypanosoma evansi* - the ELISA test or the indirect fluorescent antibody test.

b. The prescribed treatments for respective parasites and diseases are:

- ear mites and internal parasites - three treatments at seven day intervals of Ivermectin injectable at 400 μg/Kg (micrograms per kilogram) subcutaneously and 5 ml in each ear canal of a solution of 50 ml Ivermectin in 1 liter of normal saline.

- leptospirosis - vaccination against *Leptospira canicola* twice at an interval of 2 to 4 weeks. This will take place such that the second injection will not occur within 14 days prior to embarkation. This will be followed by antibiotic therapy immediately on arrival in Australia with an antibiotic and dose approved by the Director.

- external parasites - wetting to the skin with an approved external parasiticide. The following formulation is currently approved:
  Part A - Amitraz 125 g/L, Part B - diazinon 200 g/L. Dilution rate, 1 liter of Part A plus 500 ml of Part B per 1000 liters of water.

c. Any animal failing a test during the program, or which cannot comply with the conditions of Appendix 1.V.1 will be removed from the consignment and, depending on the disease involved, may cause any or all of the other animals in the consignment to be detained in quarantine for further testing or may cause cancellation of the entire importation.

d. If any clause of the disease freedom declaration of Appendix 1.V.4 cannot be satisfied the importation will be canceled.

e. Drugs and other materials necessary for the above tests and treatments must be provided by the attending veterinarian, or the owner/importer.

6. TRANSPORT

a. All transport of the animals from the commencement of on-farm isolation in the USA must be undertaken in cleaned and disinfected vehicles/aircraft by the most direct practical route. (The importer and/or agent should be familiar with and have followed the recommendations for the PREPARATION FOR AIR TRANSPORT OF LIVESTOCK in the OIE International Animal Health Code 6th Edition.)

b. The animals may be consigned to Australia by air or sea only by a route approved by the Director. Transhipment requires the prior approval of the Director.

c. The animals will not be permitted to be transported to Australia in lower holds of commercial passenger aircraft.

d. During transport, the animals must be kept isolated from all animals not of tested equivalent health status. They may not be accompanied in transit by other animals except with the written approval of the Director.

e. The use of hay or straw as bedding during transport by air is not permitted; treated wood shavings, sterilized peat and softboard are suitable.

f. The consignment may be accompanied by an Australian Government veterinarian as stipulated by the Director.

g. The compartments of the aircraft/ship to be occupied by the animals and the compartments' removable fittings must have been thoroughly cleaned and disinfected immediately prior to the loadings of the animals, by a method approved by APHIS.

h. The animals must be carried in containers of no lesser standard than that described in the IATA Live Animals Regulations.

7. IMPORTER'S / AGENT'S RESPONSIBILITIES

a. The importer or the agent coordinating the importation must be Australian based and must nominate a person who must be accessible to Departmental officers int eh event of any problems or emergencies.

b. The agent and the aircraft/ship operator are responsible for the safe transportation of the animals.

c. All costs associated with the selection, testing, transport, quarantine and Australian Government veterinary supervision of the animals must be met by the importer/agent. Advance payments will be required for all Australian Government Veterinarian expenses. A bank guarantee must be provided in advance to cover quarantine costs.

d. If any animals die, are slaughtered or are rejected during any period of control, compensation will not be paid by the Government.

e. The importer must make available a microchip reader for use as required by officers of AQIS.

8. SPECIAL CONDITION

Departure from the USA may only take place between 1 January of one year and 15 May of the same year.

9. REVIEW

Conditions of importation may be reviewed if there are any changes in the import policy or the animal disease status of the USA or for any other Quarantine reason at the discretion of the Director.

APPENDIX 1

ANIMAL HEALTH CERTIFICATE
"The animals" refers to all animals to be included in this consignment of camelids from the United States of America to Australia.

I. EXPORTING AUTHORITY

Exporting country: USA
Ministry of: United States Department of Agriculture
Department: Animal and Plant Health Inspection Service
State:

II. IDENTIFICATION OF THE ANIMALS

Official Brand, ear-tag and microchip type, number and position	Sex	Age	Color

Attach other sheets if insufficient space

III. ORIGIN OF THE ANIMALS

Name and address of exporter:

Address of last place of domicile of the animals:

Addresses of all other premises where the animals have resided during the 12 months prior to on-farm isolation (Attach other sheets if insufficient space) :

Health Certificate #_____
(Valid only if USDA Veterinary Seal appears here)

IV. DESTINATION OF THE ANIMALS

Country of destination:

_____

Name and address of consignee:

_____

Nature and identification of means of transport:

_____

_____

Health Certificate #_____
(Valid only if USDA Veterinary Seal appears here)

V. SANITARY INFORMATION
ON-FARM ISOLATION CERTIFICATION

I, _____ being a United States Department of Agriculture Designated Accredited Veterinarian, being responsible for on-farm isolation and testing to which this certificate applies, certify that:

The animals to which this certificate applies are identified or described in Appendix 1. part II, attached.

1. DISEASE FREEDOM DECLARATION:

After due enquiry, I am satisfied that:

a. all of the animals for export which have been imported in to the USA have met in full the USA's requirements for importation and fulfilled all conditions of entry quarantine.

b. for the indicated minimum calendar periods prior to this date, the following diseases have not been known to occur on any premises where the animals for export have been during the previous 12 months:

vibriosis (campylobacteriosis) (2 years)
trichomoniasis (2 years)
leptospirosis (6 months)
bovine virus diarrhea/mucosal disease (2 years)
infectious bovine rhinotracheitis (12 months)
Parelaphostrongylus tenuis (2 years)
Psoroptes mange mites (2 years)

c. no premises on which the animals have been domiciled during the past 12 months has had a confirmed diagnosis of Johne's disease during the preceding 5 years. (Confirmation of Johne's disease may have been by pathological tests, serological tests, or culture of the organism.). None of the animals in this consignment has been vaccinated against Johne's disease.

d. the animals have, during the past 12 months been resident in a State or States of the USA which have been officially free from vesicular stomatitis during that period.

e. I am satisfied that the animals have, since birth, been resident only in herds free from bovine brucellosis and tuberculosis as outlined in APPENDIX 2, and all herds where the animals have been during the past five years (or since birth) have remained free from bovine brucellosis and tuberculosis during that period, OR
the animals for export have been legally imported into the United States and have passed all United States import requirements, and have, since importation been resident only in herds free from bovine brucellosis and tuberculosis as outlined in Appendix 2.

f. Each animal for export was examined within 48 hours prior to entering on-farm isolation and was found to be free from evidence of infectious or contagious disease and external parasites.

2. TESTING AND TREATMENT (during on-farm isolation)

a. All samples collected for laboratory examination were collected by a USDA accredited veterinarian.

b. All disease testing done prior to export (with the exception of tuberculin testing for tuberculosis) was performed in laboratories approved by USDA.

c. During the on-farm isolation period of not less than 30 days, the animals for export were isolated, in approved premises, from all animals not of tested equivalent health status.

d. During this period, each animal was subjected to the following prescribed tests with negative results in each case:

(i) Johne's disease - the absorbed ELISA test using anti-llama conjugate, or AGID (state which test)
Date of test_____

(ii) brucellosis (*Br abortus*) - the ELISA test using a Protein G conjugate
Date of test_____

(iii) vesicular stomatitis - the serum neutralization tests for Indiana and New Jersey

serotypes
Date of test_____

(iv) bluetongue - the AGID or cELISA and in the event of equivocal results, the serum neutralization test was done (state which test and which serotypes)
Date and type of test_____

(v) epizootic hemorrhagic disease (EHD) of deer - the AGID test and in the event of equivocal results, the serum neutralization test was done
Date of test_____

(vi) *Parelaphostrongylus tenuis* - the modified Baermann test, each fecal sample was 20 gms, each sample must remain in the test funnel for 24 hours at 18 ° - 22° C
Date of test_____

(vii) in addition, animals which have resided in South America were tested for *Trypanosoma evansi* - the ELISA test or the indirect fluorescent antibody test
Date of test_____

e. During this period and after the collection of sera for the above testes, each animal was tested for tuberculosis by the single intradermal test with negative results in each case, and the test was not done within 90 days of any previous test.

f. During this period each animal was subjected to the following testing and treatment for internal parasites and *Psoroptes* ear mites - microscopic examination of saline flushings of both ear canals, and three treatments at seven day intervals of Ivermectin injectable at 400 µg/kg (micrograms per kilogram) subcutaneously and 5 ml instilled in each ear canal of a solution of 50 ml Ivermectin in 1 liter of normal saline.

g. During this period, and at no later than day 28, each animal was vaccinated against *Leptospira canicola*, the first injection given on _____ and the second injection will be/has been given on _____. (The interval between first and second injections to be 14-28 days)

h. During this period, and after being shorn, each animal was treated for ectoparasites by wetting to the skin with _____ (give name of parasiticide used and strength)

i. During this period, the animals remained healthy and free from infectious or contagious disease.

j. Each animal for export was examined within 24 hours prior to leaving the on-farm isolation premises and was found to be free from evidence of infectious or contagious disease and external parasites.

3. TRANSPORT (between on-farm isolation and pre-embarkation quarantine premises)

The vehicles, into which the animals for export were loaded for transport to the pre-embarkation quarantine premises, had been cleaned and disinfected to my satisfaction immediately prior to the loading of the animals.

_____ _____
Signature of USDA Designated Accredited Veterinarian Date

Name and Address:

4. PRE-EMBARKATION QUARANTINE CERTIFICATION

I, _____, being a USDA Designated Accredited Veterinarian, certify that

(i) DISEASE FREEDOM DECLARATION

a. During the twelve months prior to the date of this certification, the USA has been free from:

Rift Valley fever
rinderpest
haemorrhagic septicaemia
contagious bovine pleuropneumonia
foot and mouth disease
Trypanosoma vivax and *T. evansi*
camel pox
lumpy skin disease

b. The states in which the camelids have resided during the previous twelve months have remained free from vesicular stomatitis for that period of time.

c. Since livestock were last present in the pre-embarkation quarantine premises (which has been approved by APHIS), the premises have been thoroughly cleaned and disinfected to my satisfaction.

d. The animals in the attached schedule have been maintained in the pre-embarkation quarantine premises for a minimum period of 40 days prior to export and, during this period, have been inspected periodically by an USDA accredited veterinarian and have remained healthy and free from evidence of infectious or contagious disease.

e. During this period, there have been no animals in the premises other than the animals in this consignment.

(ii) TESTING AND TREATMENT (in pre-embarkation quarantine)

a. All testing prior to export was performed in laboratories approved by USDA.

b. At 20-22 days after the start of this period, each animal was subjected to the following tests with negative results in each case:

(i) vesicular stomatitis - the serum neutralization tests for Indiana and New Jersey serotypes
Date of test_____

(ii) bluetongue - the AGID or cELISA and in the event of equivocal results, the serum neutralization test was done (state which test and which serotypes)
Date of test_____

(iii) epizootic hemorrhagic disease (EHD) of deer - the AGID test and in the event of equivocal results, the serum neutralization test was done
Date of test_____

(iv) *Br abortus*) - the ELISA test using a Protein G conjugate Date of test_____

(v) *Parelaphostrongylus tenuis* - the modified Baermann test, each fecal sample was 20 gms, each sample must remain in the test funnel for 24 hours at 18 º - 22º C
Date of test_____

and in the case of animals which have resided in South America:
(vi) *Trypanosoma evansi* - the ELISA test or the indirect fluorescent antibody test
Date of test_____

c. At 50-52 days the camelids were tested again for bluetongue and EHD by the same tests.
Date of tests: _____

d. During this period those camelids requiring their second vaccination against *Leptospira canicola* received the injection on _____ (date).

e. I examined each animal for export within 24 hours prior to leaving the pre-embarkation quarantine premises and all were found to be free from evidence of infectious or contagious disease and external parasites and were fit to travel.

(iii) TRANSPORT **(from pre-embarkation quarantine to Australia)**

a. The vehicles for the transport of the animals to the airport/seaport were cleaned and disinfected with a suitable disinfectant to my satisfaction immediately prior to the loading of the animals.

b. The animals were transported to the place of embarkation by the most direct practical route and they remained isolated from animals not tested to an equivalent health status.

c. All crates and boxes and their removable fittings used for the transportation of the animals were cleaned and disinfected with a suitable disinfectant to my satisfaction immediately prior to the loading of the animals.

d. The compartments of the aircraft/vessel to be occupied by the animals during transport to Australia, and the compartments' removable fittings were cleaned and disinfected with a suitable disinfectant to my satisfaction immediately prior to the loading of the animals.

_____ _____
Signature of USDA Designated Accredited Veterinarian Date

Name and Address:

APPENDIX 2

BRUCELLOSIS AND TUBERCULOSIS - IMPORT REQUIREMENTS

Brucellosis or bovine brucellosis shall mean the disease caused by or the presence of *Brucella abortus.*

Tuberculosis or bovine tuberculosis shall mean the disease caused by or presence of *Mycobacterium bovis.*

1. The camelids must originate from premises upon which no susceptible animal has had brucellosis in the past five years, and is located in a county or state in which:

   i) no case of bovine brucellosis has occurred, and all herds have remained officially free from bovine brucellosis for the past five years,

   OR

   ii)

   a) bovine brucellosis is compulsorily notifiable and an official surveillance program is in place which is deemed sound by the Director, and eradication is practiced,

   b) less than 0.2% of herds are infected with brucellosis

   c) no camelid has been vaccinated against bovine brucellosis,

   d) all reactors and suspect cases are investigated, and

   e) all introduced bovines/cervines originate from brucellosis free herds, or are non-vaccinated and subjected to at least two approved tests with negative results at an interval of 30 days prior to entry, and

   f) all introduced camelids are non-vaccinated and subjected to at least two approved tests with negative results at an interval of 30 days prior to entry, AND

2. The camelids must originate from premises upon which no susceptible animal has had tuberculosis during the past five years, and is located in a county or state in which:

   i) no case of bovine tuberculosis has occurred, and all herds have remained officially free from bovine tuberculosis for the past five years,

   OR

   ii)

   a) bovine tuberculosis is compulsorily notifiable and an official surveillance program is in place which is deemed sound by the director, and eradication is practiced,

   b) 99.8% or herds have been officially free from bovine tuberculosis for at least 3 years and/or 99.9% of the cattle/deer have been in officially tuberculosis free herds for at least 6 years, and

   c) all reactors and suspect cases are investigated by the Veterinary Administration which has the capacity to confirm diagnosis by microscopic, biological and/or cultural examination, and

   d) all introduced bovine/deer originate from officially free herds and are subjected to an approved tuberculin test with negative result within 30 days prior to entry to the county or state, and

   e) all camelids have been tested for tuberculosis within 30 days prior to entry to the county or state with a negative result.

APPENDIX 4

TECHNIQUE OF EAR FLUSHING FOR COLLECTION OF MITES FROM ALPACAS

The procedure is done with the animal standing and restrained by a single attendant, or in a crush, although this is less satisfactory as there may be insufficient control over head movements and washings can be lost.

The 'flushing apparatus' consists of a 10ml disposable syringe to which is attached approximately 6-7cm of clean 3mm vinyl tubing. Attached to the tubing is a disposable micropipette tip cut off and carefully smoothed and rounded at the small ridge towards its tip. The rounding is to prevent damage to the alpacas ear which has a delicate, narrow canal and also helps to safeguard the operators forefinger which can also be worn or damaged when large numbers of animals are examined. This leaves a nozzle diameter of about 1.5mm which is sufficient to produce suitable pressure for the jet of fluid which passes through it.

Both ears are flushed using the following technique and the washes combined. There is no justification for examining them separately.

The tip needs to be passed firmly, almost in a vertical position, down the edge of the lateral (outer) aspect of the ear canal. Often the canal is partly occluded by a small cartilaginous protuberance, but this can be easily felt it the forefinger directs the line of the introduced tip from within the ear and firmly steers it down the outer edge. If the tip is not carefully directed it will follow any one of several auricular folds and the liquid will not enter the ear canal. Approximately 4-5 ml of normal saline is injected forcefully into the canal of an adult alpaca; 2-3ml is sufficient for small animals.

The tube is then removed from the ear canal and pipette replaced for use in the next animal.

The liquid is aspirated from the ear canals with a disposable plastic transfer pipette from which the last two tapering graduations at the tip have been snipped off. This pipette has the ideal degree of flexibility with an external diameter of 5mm which enables it to be passed into the ear canal but not so far that it can cause damage. The bore is sufficiently large to avoid clogging with detritus. In most cases up to 80% of the total volume introduced can usually be recovered.

The washings should be kept cool, out of sunlight and preferably processed on the day of collection. Mites survive only for short periods in washings from abscessed or infected ears, and in such cases should be processed first.

Washings are processed in the following manner. Depending on the amount of detritus the mixture is either washed through a coarse sieve (e.g. tea strainer) to retain hair and large crusts or more usually poured directly on to a black 70mm filter paper disc in a Buchner funnel to which light suction is applied.

This results in mites being well distributed over the surface of the black filter paper which is then removed and placed in a petri dish. Live mites and eggs are counted using an overhead cold light source under a stereomicroscope. The mites are relatively large (0.7-0.8mm) active and easily seen. Use a 15-20x magnification for scanning the filter paper, but 25x magnification is probably more appropriate for those unfamiliar with the technique.

The recovery rate is very high. One animal yielded 96 mites and more than 150 eggs on Day 0 with a repeat washing on Day 6 yielding only 3 immature mites.

If mites are observed a small sample (approx. 10 specimens) should be preserved in 70% alcohol (not formalin) for taxonomic confirmation of the genus and the remainder collected in saline, washed gently and cryopreserved for later speciation. It has been found that larval trombiculid mites in ear washings from alpacas and both sarcoptic and chorioptic motes have been recovered from this host elsewhere. Chorioptes is prevalent in New Zealand goats and could quite likely be on untreated alpacas from that source.